

"When ENTERing or INSERTing data. If RETURN key is pressed without any data being placed in the line, Database will enter/insert a row of nine asterisks. This can be used as a handy divider, clearly separating one block of lines from another. The asterisks can be replaced with any characters you wish, to serve any purpose you can think of (the Basic lines in the listing are 430 and 460).

AUTO repeat of INPUT in same place on screen, with warning buzz, if you try to enter a line number longer than the maximum permitted, or if an END line number is less than a START line number. Fractional/negative entries for line numbers are rectified.

Where START and END line numbers are requested (HARD COPY, ALPHABETIZE). If you want the entire file operated on, simply press RETURN key twice. To START at line 0 and END at a certain line number, press RETURN, enter END line number and press RETURN. To START at a certain line number and work to end of file, enter START line number and press RETURN twice.

The ALPHABETIZE routine will display its progress on the screen: each successive line number will appear in bottom left of screen as the new start and the numbers of all the lines processed each time are rapidly displayed to the right.

PAGE CALL (press P). If RETURN is pressed without entering page number, Database takes this as page one. Then each successive press of P will display the next page; to restart PAGE CALL, simply press RETURN and P keys.

CATALOGUE has HALT and QUIT options. If there are too many catalogue lines to fit on one screen, CATALOGUE will display the excess lines in scroll fashion with pause between each line. Press any character key other than M to HALT CATALOGUE; again press any character other than M to CONTINUE CATALOGUE. Or press M key to QUIT CATALOGUE before CATALOGUE finishes its listing.

By altering/adding six lines of coding an INCREMENT LINE NUMBER is implemented. This allows you to enter successive lines of data without the irritation of having to press the E key again, then enter line number, then press RETURN. Simply press CTRL key and the ENTER LINE NUMBER will be incremented, allowing you to enter the data for the new line straight away. If you want to change the last line

you entered/inserted/deleted, press X key and enter data.

## Database

by Robert Quinn

In the August 1984 issue of APC a database program for the VZ-200 was published, submitted by Ted Barker.

We have since received a letter from

Robert Quinn of Wagga Wagga who insists that the program was a "sloppy, incompetent piece of coding, filled with errors, omissions and redundancies".

Tough stuff, eh!

But Quinn has put his money where his mouth is and supplied his own version of the program for VZ owners. Over to Robert...

Cassette SAVEing and LOADing is far too slow and unreliable for me to ever make use of the SAVE/LOAD routines of Database (imagine trying to SAVE/LOAD 399 lines of data, each line a separate data file on tape). Besides I have a disk drive and so will be designing DISK SAVE/LOAD routines. However, the cassette SAVE/LOAD routines could be sped up. One way would be to fit several Database lines in each data file to tape. I leave that to someone else to develop who has the interest/need.

Another option is to have the SAVE routine only record those Database lines which have data in them, skipping the empty lines until the next data-containing line is reached. Of course it would only speed up CSAVEing and CLOADing if there are lots of empty lines between lines of data. I have designed the modifications that should do the trick and appended the code to the end of the listing. If you wish to try it then enter those modified/additional lines to the program.

In the listing INVERSE characters are underlined.  $K=K+1$ : of line 1270 can be deleted (a harmless redundancy of BARKER that slipped through)."

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# DATABASE: R.Q. VERSION

```
100 COLOR,1: CLEAR 12000: F0=" " : E0="C",  
P,E,I,N,S,L,M,D,A,M"  
110 CLS: PRINT "FILE NAME.": INPUT T: IFT0=  
" " THEN T="NO NAME"  
130 T0=LEFT(T,14): Y0="ARE YOU SURE (Y/  
N)"  
140 N=400: P=1: X=(N+1)/10: DIM S(N): R0="LI  
NE NUMBER"  
145 FOR J=0 TO N: S(J)="-": NEXT N: N=N-1: CLS: G  
OTO 200  
150 K=0: CLS: PRINT 00, "CATALOGUE " : T0: PRI  
NT: PRINT "PAGE"  
160 FOR J=0 TO N: AK=ASC(S(J)): IF AK=195 AND K  
>13 THEN SOUND0,2  
170 IF AK=195, PRINT INT(J/10+1); RIGHT$(S(J  
,LEN(S(J))-1): K=K+1  
175 A0=INKEY$: A0=INKEY$: IF A0="" THEN Z=NO  
T2: SOUND0,2  
180 IF S(J)="" THEN DRA0="N" THEN N=N: GOTO 190  
185 IF Z<0 THEN 175  
190 NEXT J: Z=0  
195 REM CONTROL KEYS  
200 GOSUB 490  
210 IF A0="C" THEN 150  
220 IF A0="P" THEN 340 ELSE IF A0="E" THEN 410 EL  
SE IF A0="I" THEN 440  
230 IF A0="N" THEN 520 ELSE IF A0="S" THEN 1210 E  
LSE IF A0="L" THEN 1320  
240 IF A0="H" THEN 500 ELSE IF A0="D" THEN 730 EL  
SE IF A0="A" THEN 1500  
250 IF A0="M" THEN 500  
260 GOTO 200  
290 REM GENERAL LINE INPUT  
300 A=0: PRINT 0304, C0, R0, F0: PRINT 0402, "  
: INPUT A0  
310 J=ABS(INT(VAL(A0))): IF A0="" THEN A0="Z"  
ELSE GOSUB 500  
320 IF J>N THEN SOUND0,2: GOTO 300 ELSE RETURN  
330 REM PAGE CALL  
340 PRINT 0304, "ENTER PAGE NUMBER.": INPUT  
A0: P=ABS(INT(VAL(A0)))  
345 IF P=0 THEN P=1 ELSE IF P>X THEN SOUND0,2: G  
OTO 340  
350 CLS: PRINT "PAGE "P" : T0: PRINT  
360 FOR J=0 TO 9: L=(P-1)*10+J: PRINT L: S(L):  
NEXT  
370 GOSUB 490  
380 IF A0<2 THEN 210  
390 P=P+1: IF P>X THEN P=1  
400 GOTO 350  
405 REM ENTER  
410 C0=" " ENTER " : GOSUB 300  
420 IF A0=0 THEN 210  
430 INPUT S(J): IF S(J)="" THEN S(J)=""  
435 P=INT(J/10+1): GOTO 350  
438 REM INSERT  
440 C0=" " INSERT " : GOSUB 300: IF A0=0 THEN 210  
450 INPUT D0: CLS  
460 IF D0="" THEN D0=""  
470 FOR J=J+1 TO N: S(J)=S(J-1): S(J-1)=D0: N=N  
NEXT J  
480 FOR J=K TO J+1 STEP 1: S(J)=S(J-1): N=N  
T  
485 S(J)=D0: P=INT(J/10+1): GOTO 350  
488 REM CHANGED YOUR MIND?  
490 PRINT 0490, E0: GOSUB 890  
500 A=0: FOR I=1 TO 1: IF ASC(MID$(E0, I, 2-1))  
-120=ASC(A0) THEN A=1: I=12  
510 NEXT I: RETURN  
515 REM RERUN  
520 CLS: PRINT 0131, Y0: INPUT A0: IF A0="Y" TH  
EN RUN ELSE CLS: GOTO 200  
550 REM MENU  
560 CLS: PRINT 06, "MENU": PRINT 000, "CATAL  
OGUE"  
570 PRINT "PAGE CALL": PRINT "ENTER  
:PRINT" "INSERT"  
580 PRINT "NEW FILE"  
590 PRINT "SAVE ON TAPE": PRINT "LO  
AD FROM TAPE"  
600 PRINT "HARD COPY ON PRINTER"  
610 PRINT "DELETE": PRINT "ALPHABET  
12E"  
620 GOSUB 490: GOTO 210
```

```
1405 REM END OF SAVE/LOAD  
1410 CLS: PRINT 0440, "COMPLETE " : SOUND0,3,  
2: 20, 2: 10, 2: 0, 5: GOTO 0350
```

```
1490 REM ALPHABETIZE  
1500 CLS: PRINT 0440, "ALPHABETIZE": C0=" " STA  
RT " : GOSUB 300  
1505 IF A0=0 THEN 1050 ELSE K=J: PRINT 0440, K  
1510 C0=" " END " : GOSUB 300: N=J: IF A0=0 THEN  
1050 ELSE IF A0="Z" THEN N=N  
1515 IF N=K THEN SOUND0,2: GOTO 1510  
1520 FOR I=K TO K STEP 1: N=I: IF S(I)="" THEN "THE  
N I=0: GOTO 1540  
1540 NEXT I=0  
1580 J=K: PRINT 0440, I+K: " : IF I=N-K THEN  
350  
1590 IF J=N-I THEN 620  
1600 IF S(J)>S(J+1) THEN T0=S(J): S(J)=  
S(J+1): S(J+1)=T0  
1610 J=J+1: PRINT 0455, J: " : GOTO 1590  
1620 I=I+1: GOTO 1580  
1650 CLS: PRINT 0490, E0: GOTO 0210
```

## FOR INCREMENTING ENTER LINE NUMBER

```
145 FOR J=0 TO N: S(J)="-": NEXT N: N=N-1: J=0: C  
LS: GOTO 200
```

```
192 NEXT Z=0: J=0
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```
255 IF A0="X" THEN SOUND0,1: PRINT 0304, R0: J  
: GOTO 430
```

```
890 A0=INKEY$: A0=INKEY$: IF A0=CHR$(13) THE  
N A0="Z"  
895 IF PEEK(26877)=25 AND J<N THEN J=J+1: CLS  
: A0="X"  
900 IF A0="" THEN 890 ELSE RETURN
```

## NEW SAVE/LOAD ROUTINES

```
1240 FOR I=0 TO 9 STEP 1: K=I: IF S(I)="" THEN "THE  
N I=0: NEXT I: NEXT I  
1250 FOR I=0 TO K: IF S(I)="" THEN "THE N F=I+1: NEX  
T I: NEXT I  
1260 INPUT " THEN PRESS (RETURN)": C  
1270 CLS: PRINT 0440, "SAVING"  
1275 PRINT "UZ-DATA", F: SOUND0,3  
1280 FOR I=0 TO K: IF S(I)="" THEN 1300  
1290 PRINT "DATA", I, S(I): PRINT 0456, " LI  
NE " : I: SOUND0,3  
1300 NEXT I: F=0: GOTO 1410
```

```
1400 INPUT "DATA", F, S(F): PRINT 0416, "LIN  
E": IF I=0: NEXT
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```
720 REM DELETE  
730 C0="DELETE " : GOSUB 300  
735 IF A0=0 THEN 210  
740 FOR I=J TO N: IF S(I)="" THEN "AND S(I+1)="" THEN  
NEXT I=N  
750 S(I)=S(I+1)  
760 NEXT I: S(N+1)="" : P=INT(J/10+1): GOTO 03  
50
```

```
800 REM WAITING  
890 A0=INKEY$: A0=INKEY$: IF A0="" THEN 890 EL  
SE IF A0=CHR$(13) THEN A0="Z"  
900 RETURN
```

```
940 REM HARD COPY  
950 CLS: PRINT 041, "HARD COPY": C0=" " START  
: GOSUB 300: IF A0=0 THEN 210  
960 K=J  
970 C0=" " END " : GOSUB 300: N=J: IF A0=0 THEN 2  
10 ELSE IF A0="Z" THEN N=N  
980 IF N=K THEN SOUND0,2: GOTO 970  
990 LPRINT " " : T0: LPRINT  
1030 FOR I=K TO N: AK=ASC(LEFT$(S(I),1))  
1040 IF AK=195 THEN GOSUB 1070: GOTO 1050  
1050 IF S(I)="" THEN LPRINT S(I)  
1060 NEXT I: K=0: GOTO 200  
1070 FOR I=1 TO LEN(S(I)): AK=ASC(MID$(S(I  
, I, 1))  
1080 IF AK=223 THEN AK=AK-192 ELSE IF AK=191 TH  
EN AK=AK-128  
1090 LPRINT CHR$(AK): NEXT I: LPRINT: RETURN
```

```
1200 REM SAVE ON TAPE  
1210 CLS: PRINT 041, "SAVE ON TAPE"  
1220 PRINT 0131, Y0: INPUT A0: CLS: IF A0="" THEN  
THEN 200  
1230 PRINT 0132, "PREPARE CASSETTE": PRINT  
1240 INPUT " THEN PRESS (RETURN)": C  
1250 CLS: PRINT 0440, "SAVING"  
1260 FOR I=0 TO 9 STEP 1: K=I: IF S(I)="" THEN "THE  
N I=0  
1270 NEXT I: K=K+1: PRINT "UZ-DATA", K  
1280 FOR I=0 TO K  
1290 PRINT "DATA", S(I): PRINT 0456, " LINE  
: I  
1300 NEXT I: GOTO 1410
```

```
1310 REM LOAD FROM TAPE  
1320 CLS: PRINT 035, "LOAD FROM TAPE"  
1330 PRINT 0131, Y0: INPUT A0: IF A0="" THEN  
CLS: GOTO 200  
1340 INPUT " FILE NAME": T0  
1350 CLS: PRINT 0132, "PREPARE CASSETTE"  
1360 INPUT " THEN PRESS (RETURN)": C  
1380 CLS: INPUT "UZ-DATA", K  
1390 FOR I=0 TO K  
1400 INPUT "DATA", S(I): PRINT 0456, "LINE"  
: I: NEXT
```

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